



*Original Research Article*

# **A case study on measuring patients' perception of quality of health service at Kirnetar Health Centre, Dhulikhel Hospital by a patient satisfaction survey**

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**Quality of care in health service can be measured by a patient satisfaction survey. The results of the survey can serve as a baseline for further quality improvement interventions. This case study was conducted at an outreach clinic of Dhulikhel Hospital, Kirnetar Health Centre to measure patient satisfaction in the survey, to plan interventions based on the results of the survey and to replicate the model in all the outreaches of Dhulikhel Hospital. A questionnaire was created after focused group discussions with the staff of the outreach clinic and after interviews with patients. The questionnaire was then administered to the participants by high school students from a nearby school. There were a total of 25 participants. A majority of the participants were satisfied with the care they received. However, satisfaction levels were low on waiting time and the way financial conditions of the patients were not considered by the hospital staff. Interventions were put in place to decrease the waiting time and to streamline the flow of patients in the clinic. The overall satisfaction rates at the outreach clinic were high. Similar studies along with required interventions are recommended in all the outreaches of Dhulikhel Hospital.**

**Key words:** Kirnetar Health Centre, patient satisfaction, quality improvement

## **INTRODUCTION**

Quality of health care can be defined as meeting the health needs at the lowest cost and within professional standards and regulations (Ovretveit, 1992). However, the trend now is to consider users' perception as an important source of information in screening for problems and developing an effective plan of action for quality improvement in health care organization (WHO, 2004). One of the main challenges of health services in developing countries is in finding ways to make the services more patient-oriented (Rao et al., 2006). Incorporating patients' views into quality assessment offers a method of making health services more responsive to people's needs and in the long run improves the health and quality of life of patients (Crawford, 2002). At the same time, it also gives users an opportunity to voice their opinions about their health services (Rao et al., 2006).

Although there have been several papers that have

described involvement of patients in the planning and development of health care, only a few of them have described the results of those projects. The ones that have provided outcomes of the interventions have generally been case studies (Crawford, 2002).

A case study was therefore conducted at an outreach centre of Dhulikhel Hospital in Kirnetar in July, 2014 to assess the quality of health care received by the outpatients using a patient satisfaction survey. The aim of the case study was to assess the quality of health service at Kirnetar Health Centre using a patient satisfaction survey and then to replicate the model in all the outreaches of Dhulikhel Hospital. Although a few patient satisfaction surveys have been conducted in hospitals in Nepal, this case study is the first of its kind that was conducted at an outreach centre of Dhulikhel Hospital with the aim of replicating it in other

outreaches.

Dhulikhel Hospital, which is a tertiary level hospital situated in the town of Dhulikhel, at a distance of 28 km East from Kathmandu, the capital of Nepal, was established in 1996 with the aim of providing quality health care to all at affordable costs. With this aim, the hospital has also established several outreach clinics in rural Nepal to provide quality health care to all through the Department of Community Programmes, Dhulikhel Hospital.

One such clinic is Kirnetar Health Centre, situated at Kirnetar, Dolakha at a distance of 172 kilometers from Kathmandu (144 kilometers from Dhulikhel) to the East. The clinic was established in 2012 in collaboration with Himal Power Limited. It is a 5 bed secondary level facility staffed by a medical officer, two health assistants, a community health worker, an auxiliary nursing midwife, a laboratory assistant, an ambulance driver and a supporting staff. The daily outpatient flow ranges from 30 to 40 while the number of obstetric cases range from five to 10 per month.

## MATERIALS AND METHODS

This was a cross-sectional study that the age, gender and diagnoses of all the enrolled participants were recorded. The study variables that were measured included age, gender, presence or absence of directions, personnel at the registration desk, and satisfaction with regards to waiting times, staff behaviour, clinical examination and counselling, cleanliness, availability of medicines, and advise on the method of use of medications. For qualitative variables like gender, frequency and percentage were calculated.

The study population comprised the first 25 patients who agreed to participate in the study. The sampling technique that was employed was non-probability purposive sampling. Patients below the age of 16 years were excluded from the study.

One of the main challenges of conducting this study was in creating a questionnaire that would serve the purpose of assessing the quality of health service received by the patients without being lengthy and time consuming. To overcome this barrier, first a focused group discussion was held with the staff working at the outreach centre to find out the felt needs and concerns of the patients attending the outreach clinic. An affinity diagram created by the staff at the outreach clinic revealed that while issues like patient demand for free medicines and the perceived high cost of medicines could not be changed; improvements could be made on waiting time, counseling during medical consultation and at the pharmacy.

After that, three separate interviews were held with patients that revealed that quality of health care for them was availability of sufficient trained manpower, primary to tertiary level services and proper behaviour of staff.

The outcome of the meetings was used to create a succinct two page (27 questions) questionnaire in English.

The questions covered the topics of directions in the clinic, registration, waiting time for medical consultation, comfort, waiting time for laboratory results, outreach clinic staff behaviour, confidentiality, consultation time, counseling, hygiene and pharmacy. As the language of communication in the outreach clinic is Nepali, the questionnaire was translated into English and then back translated into Nepali by two independent translators. The first 25 questions of the questionnaire were close ended using Likert scale with 1 as very dissatisfied and 5 as very satisfied. The second last question was yes/no close ended while the last question was an open ended one.

Studies of this kind are prone to courtesy bias (Glick, 2009). In order to overcome courtesy bias, independent standard eight school students from Khimti Project School who were not involved in the daily workings of the outreach clinic were invited to participate in the study as interviewers. The school students were trained in administering the questionnaire by the authors. The patients who had finished their medical consultations and had been discharged were invited to participate in the survey by the medical officer.

The patients were informed that the main purpose of the study was to get patient insight into the health services currently being used by the patients at the outreach clinic and to improve on those services based on the results. They were also informed that they were free to give their honest opinion and the interview would be conducted by individuals who were not part of the outreach team clinic.

After verbal consent was obtained from the participants, a standard eight school student was then assigned to participant for the interview. The interviews were conducted in a closed room and total privacy was maintained.

After all the interviews had been conducted, the data from the written questionnaires were then entered in Microsoft Excel and the data was analyzed using descriptive statistics in SPSS Ver. 20.

## RESULTS

A total of 25 patients, 14 males and 11 females, were interviewed by 14 different students in three days period. The age of the participants ranged from 16 to 74 years and the mean was 28 years.

### Patients' satisfaction in regards to being given directions and at registration

20 out of 25 participants stated that they were not given directions for registration. However, once they made it to the registration, twenty three (92%) stated that there was someone present at the registration desk.

### Behaviour at the registration desk

At the registration desk, 20 out of 25 participants were

**Table 1.** Satisfaction with behaviour at the registration desk

Satisfaction level	Number of participants
Very dissatisfied	0
Somewhat dissatisfied	1
Neither satisfied nor dissatisfied	4
Somewhat satisfied	12
Very satisfied	8

**Table 2.** Satisfaction with waiting time for laboratory results

Satisfaction level	Number of participants
Very dissatisfied	0
Somewhat dissatisfied	2
Neither satisfied nor dissatisfied	7
Somewhat satisfied	3
Very satisfied	2

**Table 3.** Satisfaction with waiting time for X-ray results

Satisfaction level	Number of participants
Very dissatisfied	1
Somewhat dissatisfied	0
Neither satisfied nor dissatisfied	6
Somewhat satisfied	3
Very satisfied	1

**Table 4.** Satisfaction with waiting time for medications at the pharmacy

Satisfaction level	Number of participants
Very dissatisfied	3
Somewhat dissatisfied	5
Neither satisfied nor dissatisfied	3
Somewhat satisfied	7
Very satisfied	6

satisfied to some extent while only 1 was dissatisfied. This has been illustrated in Table 1.

### Patients' perception of waiting time

The waiting times for laboratory results, X-ray results, and for receiving medications at the pharmacy were assessed using the Likert scale. Table 2 reveals that one patient stated that he/she was somewhat dissatisfied with the waiting time for laboratory results while close to 50% were somewhat satisfied. Regarding the waiting time for X-ray results, one participant was very dissatisfied, another was very satisfied while the remaining were either somewhat satisfied or neither satisfied nor dissatisfied (Table 3). The results for waiting times at the pharmacy were more evenly distributed as shown in Table 4.

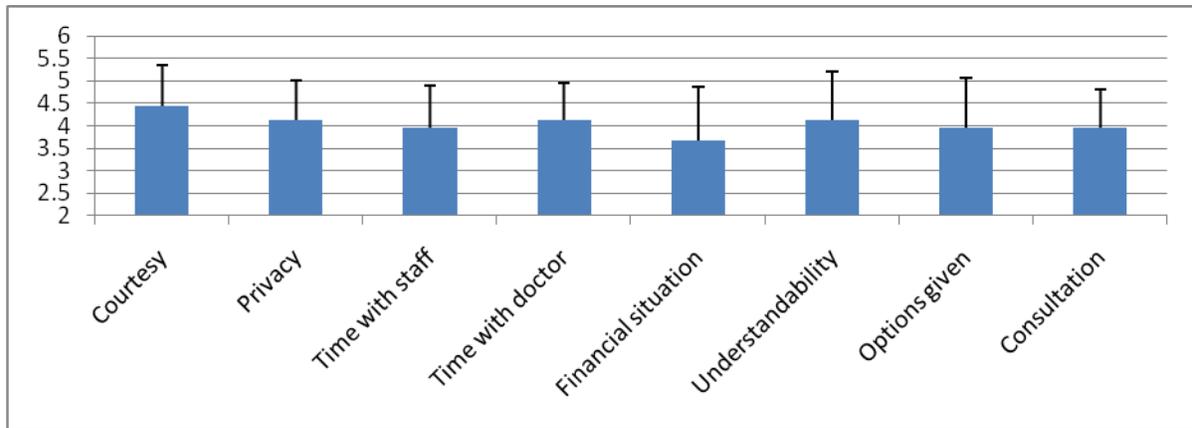
### Patient satisfaction in regards to outpatient department care

Patients were asked their satisfaction of courtesy extended

to them by the hospital staff, the level of privacy maintained, the time they were given by the doctor and by other hospital staff, consultation including counseling on treatment options and whether their financial situation was considered or not. The results can be seen in Figure 1, which reveals that the mean score for each variable was above neither satisfied nor dissatisfied. As revealed in the figure, the satisfaction rate was highest for courtesy shown by the physician during the clinical consultation while lowest scores were recorded for acknowledging the financial situation of the participants.

### Patient satisfaction in regards to maintenance of aseptic conditions:

Patients who had procedures performed on them ranked the cleanliness of the equipment and setting as well as their comfort level before and during the procedure. 50% of the participants were neither satisfied nor dissatisfied with the cleanliness while 30% were somewhat satisfied to very satisfied (Table 5). Remarkably, more than 75% stated that



**Figure 1:** OPD patient satisfaction scores

**Table 5.** Satisfaction level regarding cleanliness of equipment and procedure room settings

Satisfaction level	Number of participants
Very dissatisfied	0
Somewhat dissatisfied	2
Neither satisfied nor dissatisfied	7
Somewhat satisfied	3
Very satisfied	2

**Table 6.** Satisfaction level regarding comfort during medical/surgical procedures

Satisfaction level	Number of participants
Very dissatisfied	0
Somewhat dissatisfied	1
Neither satisfied nor dissatisfied	4
Somewhat satisfied	10
Very satisfied	9

**Table 7.** Overall satisfaction

Satisfaction level	Number of participants
Very dissatisfied	1
Somewhat dissatisfied	0
Neither satisfied nor dissatisfied	4
Somewhat satisfied	7
Very satisfied	13

they felt comfortable when undergoing medical/surgical procedures while only one stated that he/she was somewhat dissatisfied with the comfort level during procedures (Table 6).

**Patients’ perception of pharmacy**

The pharmacy was evaluated on counseling and drug availability. 23 out of 25 participants responded that the prescribed medicines were available at the pharmacy and that they were appropriately counseled regarding the

correct usage of the drugs. However, 6 participants stated that the medications dispensed at the pharmacy had crossed their expiry date.

**Overall satisfaction**

At the end, the patients were asked whether they were on the whole satisfied with the outreach clinic. One participant was very dissatisfied, four were neither satisfied nor dissatisfied while the remaining 20 were somewhat satisfied to very satisfied (Table 7). They were also asked

whether they would recommend the clinic to other friends and family members. All the participants except one stated that they would recommend the clinic to others.

## DISCUSSION

The main aim of measuring patient satisfaction was to evaluate the quality of health service from the point of view of patients and to solve any issues that needed to be resolved (Sitzia and Wood, 1997). Although there were three similar conducted studies conducted in Nepal (Gurung et al., 2006; Dahal and Bhandari, 2012; Rizyal, 2012) this was the first study to be conducted in a rural setting in Nepal. The overall satisfaction rate of this study (80%) is similar to the other studies done in Nepal – 73% (Dahal and Bhandari, 2012), 74% (Gurung et al., 2006) and 76.8% (Rizyal, 2012).

Although, the study revealed that the overall satisfaction of patients visiting Kirnetar Outreach Clinic of Dhulikhel Hospital was high, there were a few areas that required intervention. One of the major areas of concern was the perceived lack of signboards showing direction to registration. This was rectified by putting up a sign at the entrance of the clinic showing the direction to registration desk. A follow up study in the same centre is being done to investigate the outcome of this intervention.

Similarly, another main factor where the patients stated that the clinic could be improved upon was the waiting time. A recent study from Nepal published in 2017 has also stated that longer waiting times are associated with higher dissatisfaction rates (Mehata et al., 2017). In order to streamline the flow of patients and to avoid unnecessary confrontations, a notice was put up at the registration desk that stated that patients will be catered to on a first come first serve basis except in the case of emergencies.

The level of patient satisfaction at the outpatient department was very high especially in regards to courtesy. However, the patients did acknowledge that their financial conditions were not always taken into consideration. This is especially important as most treatments in developing countries impose heavy financial burden on poor patients (WHO, 2000). The relevance in the context of Nepal is significant as health care is usually paid out of pocket (Su and Sax 2009). One of the reasons for the physician not taking the financial situation of the patients into consideration could be the potential offence the patients may take when questions probing their financial status are put forth. There is further room for improvement in this area where the treating physicians should be able to take the financial conditions of the patients into consideration in a non-patronizing manner.

Patient satisfactions levels for medical/surgical procedures were very good. This is in contrast to a recently published study in Nepal where the authors have stated that the lowest satisfaction rates were observed in adequacy of medical equipment (Karkee et al., 2014). However, 24% of the participants stated that the

prescribed medicines had passed their expiry date. When the pharmacy computer system that operates on Midas was checked, none of the medicines had expired. The results were also compared with the staff record of prescribed medicines and their expiry date and all of the medicines were found to be within their sell by date. This has therefore led us to believe that there may have been some discrepancies in patients' understanding of the question. We therefore recommend the question regarding the expiry date of the medicines to be better phrased for similar studies in other outreaches.

Lastly, one patient stated that he/she would not recommend the clinic to others. There is a real threat of health service seekers bypassing service providers based on perception of low quality (Leonard et al., 2002).

The overall satisfaction rates at the outreach clinic were high (80%) and can serve as a model for other outreaches. We recommend that similar studies along with required intervention be carried out in all the outreaches of Dhulikhel Hospital. This will not only give the outreach clinics an overall picture of patient satisfaction in those clinics but will also serve as pointers for interventions in specified areas.

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## Conflict of Interests

The authors declare that there is no conflict of interests regarding the publication of this manuscript.

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## APPENDIX

## PATIENT PROFORMA

Name:           Age:           Address:           Education

Date:           Time:

Name of student taking the interview:

Please choose one answer:

1. Very dissatisfied
2. Somewhat dissatisfied
3. Neither satisfied nor dissatisfied
4. Somewhat satisfied
5. Very satisfied
1. On your first Visit to the clinic, did anyone help with the directions? Y/N
2. When you came to the clinic, was anyone there to register your name? Y/N
3. How well did the personnel doing registrations treat you?
4. Did you wait for your turn when you came for check ups today? Y/N
5. How long did you have to wait when you came for check up today?
6. How comfortable was the hospital setting?
7. How long did you have to wait for stool and Urine examinations?
8. How long did you have to wait for the X-ray?
9. How did the hospital staff treat you?
10. Do the hospital staff maintain your patient privacy?
11. How would you feel about the time and advice given by the healthcare staff?
12. How would you feel about the time and advice given by the doctor?
13. Do the hospital staff acknowledge your financial status?
14. How well do you understand when the doctor explains your health condition or disease to you?
15. Were you informed about the different alternative treatments for your condition and were you involved in selecting the most appropriate treatment for your condition?
16. How would you rate the consultation you received today?
17. How much emphasis is given to the cleanliness of the equipment in the clinic?
18. When you had a procedure done on you how comfortable or uncomfortable was it?
19. Were the essential medicines for your condition available?
20. If you needed drugs, were they expired? Y/N
21. How would you feel about the instructions given at the pharmacy?
22. How long did you feel you had to wait at the pharmacy?
23. Are you satisfied with the treatment you received today?
24. Are you satisfied with the treatment facilities this clinic has provided for the past year?
25. Were the treatment facilities you were looking for available at the clinic?
26. Will you advise your friends and family to visit this clinic for their health problems? Y/N
27. What additional changes need to be made in this clinic to make the service better?